Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

Syngenta Crop Protection Inc.
Multi-Product Facility
Agency Interest No.: 2367
Activity Number: PER20080007
Proposed Permit Number: 2842-V2

I. APPLICANT

Company:
Syngenta Crop Protection
PO Box 11
St. Gabriel, LA 70776-0011

Facility:
Multi-Purpose Facility
3905 Highway, St. Gabriel, LA
Iberville, Louisiana
UTM: Zone 15 682850 E 3347736 N
SIC Code 2879, 2869

II. FACILITY AND CURRENT PERMIT STATUS

Syngenta Crop Protection Inc, Multi-Product Facility (MPF), is an existing batch production facility. The Multi-Product Facility currently operates under Permit No. 2842-V1, issued November 30, 2003 and Administrative Amendment dated February 21, 2005.

Eight Part 70 permits addressing the facility have already been issued. They are:

Permit #	Units or Sources	Date Issued
2842-V1	Multi-Product Facility	11/30/2003
2897-V0	Packaging Unit	02/25/2005
2904-V1	Herbicide Production Unit	09/15/2006
2931-V1	Micro Manufacturing Unit	12/21/2007
2898-V1	Hydrogen Cyanide (HCN) Facility	10/08/2008
2718-V3	Environmental Operations (EO)	07/14/2008
3045-V2	Inteon Facility	08/04/2008
2610-V2	Utilities Area	02/07/2007

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III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application and Emission Inventory Questionnaire were submitted by Syngenta Crop Protection Inc. on March 19, 2008 requesting a Part 70 operating permit renewal/modification. A revised application was received on December 23, 2008.

Project

The MPF is a batch production facility which manufactures a variety of specialty chemicals, pesticides, and intermediates. MPF utilizes a variety of reactors and other vessels which are configured differently depending on the campaign. All equipment vents are routed to either the Vent Gas Combustor (Emission Point 7-87), or the unit Scrubber (Emission Point 2-84), depending on the stream being generated. In addition to these reactors, the majority of the tank vents are also routed to the vent gas combustor.

The proposed modifications for the MPF are as follows:

1. Include Case-by-Case Insignificant Activity submitted May, 29, 2003 for increase in benzene and methanol emissions from Emission Point 7-87, MPF Vent Combustor as a result of the gas purification project;
2. Include Administrative Amendment received October 18, 2006 to change monitoring frequency for the MPF Vent System Scrubber (Emission Point RLP125) from every four hours to once per day;
3. Incorporate the applicable provisions of the Miscellaneous Organic NESHAP (MON) as addressed in the Notice of Compliance Guidance Document submitted October 3, 2008;
4. Include Authorization to Construct Project that was granted on October 27, 2008 to reroute the Hydrogen Vent (Emission Point 8-87) to the Vent Gas Combustor (Emission Point 7-87) and delete the Hydrogen Vent (Emission Point 8-87). The process reactors currently routed to this control device will be rerouted to Vent Gas Combustor (Emission Point 7-87), which has greater control efficiency (99.7%). The additional loading to the VGC is addressed in the emission calculations and shown on EIQ 7-87;
5. Add very minor quantities of benzene and chloro-dibenzo-dioxin emissions to the Vent Gas Combustor (VGC) (Emission Point 7-87) and include the emissions from the reactors currently routed to the Hydrogen Vent (Emission Point 8-87);
6. Update the monitoring, recordkeeping and/or reporting requirements as needed to be consistent with applicable regulatory requirements;
7. Remove Specific Condition 4, Vent System Scrubber (Emission Point 2-84), as addressed in the current permit. The condition established different VOC emission limits and associated VOC recordkeeping requirements to address the use of the solvent, heptane, during the manufacture of Tinuvin 292. This material is no longer manufactured at the facility;

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8. Delete the particulate matter (PM_{10}) emissions from the MPF Vent System Scrubber (Emission Point 2-84). There are no PM_{10} emissions from this source;
9. Revise the emission calculations for the MPF Vent Combustor (Emission Point 7-87) and the MPF Vent System Scrubber (Emission Point 2-84) to reflect current operations;
10. Revise the emission calculations for MPFFUG, MPF Equipment Fugitives, to reflect the updated component count information and chemical speciation by component based on component usage during product manufacture; and
11. Increase the production rate of Demp-amide from process enhancement. There will be no increase in permitted emissions rates.

Proposed Permit

Permit 2842-V2 will be a Part 70 operating permit renewal/modification.

Permitted Air Emissions

Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM_{10}	0.65	0.16	- 0.49
SO_2	17.22	1.24	- 15.98
NO_X	13.53	13.54	+ 0.01
CO	4.40	4.38	- 0.02
VOC*	110.34	108.14	- 2.20

*VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	Before	After	Change
Acetonitrile	<0.01	-	-
Ammonia	0.02	< 0.001	- 0.02
Benzene	<0.01	<0.001	-
Chlorinated Dibenzo-P-Dioxins	-	<0.0001	<0.0001
Cumene	<0.01	0.16	+ 0.16
Ethylbenzene	-	0.004	+ 0.004
Ethylene Glycol	<0.01	<0.001	-
Hydrogen Chloride	10.09	0.001	- 10.09
Hydrogen Fluoride	<0.01	-	-
Methanol	16.01	12.09	- 3.92
Sulfuric Acid	-	0.02	+ 0.02
Toluene	28.64	33.71	+ 5.07

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*VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	Before	After	Change
Tri chloroethylene	-	<0.001	-
Naphthalene	-	0.01	+ 0.01
Xylene	<0.01	0.31	+ 0.31
Total	54.76	46.31	- 8.45
Other VOC (TPY):		61.83	

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

ID No.	Requirement	Note
-	See Tables X and XI of Air Briefing Sheet	-

Prevention of Significant Deterioration/Nonattainment Review

The Multi-Product Facility is an existing facility. There have been no increases associated with this modification that would trigger PSD review. Therefore, the PSD regulations do not apply.

MACT Requirements

The Multi-Product Facility is a major source of toxic air pollutants as defined in LAC 33:III.Chapter 51. Therefore, Maximum Achievable Control Technology (MACT) is applicable.

Air Quality Analysis

Impact on air quality from the emissions of the proposed unit will be below the National Ambient Air Quality Standards (NAAQS) and the Louisiana Ambient Air Standards (AAS) beyond industrial property.

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General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

Not Applicable

VI. PERIODIC MONITORING

Not Applicable

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H_2S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_X) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2).

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Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: ≥ 10 tons per year of any toxic air pollutant; ≥ 25 tons of total toxic air pollutants; and ≥ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.
Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) – An oxide of sulfur.

Sulfuric Acid (H_2SO_4) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.